BARSHAY, G.S.; BULAKH, G.I.; GUSMAN, M.T.

Use of jet bits in turbodrilling. Neft.khoz. 39 no.1:8-13 1 Ja
'61.   (MIRA 17:3)

IOANNESYAN, R.A.; GUSMAN, M.T.; TAGIYEV, E.I.

Development of turbine drilling in the U.S.S.R. Neft.
khoz. 42 no.9/10:107-114 S-O '64.   (MIRA 17:12)

GUSMAN, M.T.; AGAYEV, A.I.

Efficiency characteristics of a turbodrill. Neft. khoz. 43
no.5:11-16 My '65.
(MIRA 18:6)

GUSMAN, M.T.; NIKITIN, G.M.; SOBKINA, I.V.

Some results in operations with multisectional turbodrills. Trudy
VNIIBT no.14:140-150 '65.   (MIRA 18:5)

ACC NR: AP7002603   (A, N)   SOURCE CODE: UR/0413/66/000/023/0110/0110

INVENTORS: Agayev, A. I.; Kol'chenko, A. V.; Malkin, B. D.; Kuznetsova, I. I.; Nikitin, G. M.; Guzman, M. T.

ORG: none

TITLE: A stopped rolling axle support. Class 47, No. 189254

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 110

TOPIC TAGS: antifriction bearing, ball bearing, bearing race

ABSTRACT: This Author Certificate presents a stopped rolling axle support containing thrust roller bearings, spacing collars, and an annular elastic element (see Fig. 1). To eliminate loose axle holes and to increase the efficiency under dynamic loads, the ball bearings of the support are placed in two rows, with the balls running between the outside flanges and the internal flange. The annular elastic element is mounted on each side of each ball bearing at a small distance from a spacing ring. A split bushing is placed between the inner flanges of the corresponding ball bearings.

Card 1/2   UDC: 621.822.3

ACC NR: AP7002603

Fig. 1. 1 - balls; 2 - outside flange;
         3 - inner flange; 4 - annular
         elastic element; 5 - space;
         6 - spacing ring; 7 - split
         bushing
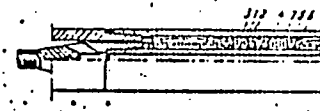
Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 05Mar66

Card 2/2

L 01805-67   EWT(m)/T   DJ

ACC NR: AP6030592 (AN)   SOURCE CODE: UR/0413/66/000/016/0074/0074

INVENTOR: Garzanov, G. Ye.; Petyakina, Ye. I.; Bagryantseva, P. P.; Shames, F. Ya.; Ravikovich, A. M.; Boshchevskiy, S. B.; Maloletkov, Ye. K.; Selivanchik, Ya. V.; Gusman, M. Ye.; Skvirskiy, P. A.; Aver'yanov, V. A.; Uzunkoyan, P. N.; Pisarchik, A. N.; Mikhaylov, Yu. A.; Belogradskiy, A. P.; Bayevskiy, F. S.; Fomin, N. I.

ORG: none

TITLE: Method of obtaining a hydraulic lubricant. Class 23, No. 185000. [Announced by the Scientific Research Institute for Organization, Mechanization, and Technical Assistance to Construction (Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskov pomoshchi stroitel'stvu)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 74

TOPIC TAGS: lubricant, lubricant additive, antioxidant additive, polymethacrylate, hydraulic lubricant

ABSTRACT: An Author Certificate has been issued for a method of obtaining a hydraulic lubricant by means of additives with an oil base. To expand the operat-

UDC: 621.892.8:621.226

Card 1/2

.L 01805-67

ACC NR: AP6030592   /

ing temperature range of oil a mixture of commerical oil and diesel-oil residue are
taken as the oil base to which a multifunctional additive is added, such as EFO, an
antioxidant agent, such as octadecylamine, and a depressing agent, such as a
polymethacrylate. [Translation]   [NT]

SUB CODE: 11/ SUBM DATE: 25May65/.

Card 2/2

L 00740-66   EWT(m)/EPT(c)/T   BW/DJ

UR/0286/65/000/014/0065/0065

ACCESSION NR: AP5021990   665.4/.5

AUTHOR: Garzanov, G. Ye.; Vinner, G. G.; Maloletkov, Ye. K.; Bogdanov, Sh. K.;
Sergiyenko, V. G.; Petyakina, Ye. I.; Selivanchik, Ya. V.; Vertlib, Ya. Ye.;
Gusman, M. Ye.; Shamsa, F. Ye.; Smirnov, M. I.; Granat, A. M.; Bulantseva, T. P.;
Krylova, T. N.

TITLE: A method for producing hydraulic fluid. Class 23, No. 172947

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 65

TOPIC TAGS: hydraulic fluid, petroleum product

ABSTRACT: This Author's Certificate introduces a method for producing hydraulic
fluid based on petroleum products. The efficiency of the fluid at low tempera-
tures is improved by using a velosite distillate with a flash point of 115-120°C
and a viscosity of less than 2200 centistokes at -40°C.

ASSOCIATION: Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i
tekhnicheskoy pomoshchi (Scientific Research Institute for Organization, Mechani-
zation and Technical Assistance)

Card 1/2

L 00740-66

ACCESSION NR: AP5021990

SUBMITTED: 14Aug64

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: IP

Card 2/2

Effect of flight on the vitamin metabolism of aviators.
G. M. Gusman, D. M. Shteingart, and K. N. Kharadze.
Byull. Eksptl. Biol. Med. 19, No. 6, 37–40(1945).—
Aviators, after a 2-hr. cruising flight at 500 m. altitude,
showed a loss in blood carotene of 14%, a rise of blood
pyruvic acid of 7%, and a decrease in blood ascorbic acid
of 15%. For a second group of aviators, with 1.5-hr.
combat practice at an altitude of 400 m., the correspond-
ing figures were 30, 36, and 38%. Certain clinical symp-
toms of aviators after flights, as weakness, pain in the
lower extremities, etc., may in part be due to the ex-
haustion of the vitamins in the blood.   H. Priestley

A S 8 - S L A   METALLURGICAL LITERATURE CLASSIFICATION

GUSMAN, S. M.,prof.

Blood coagulation in angina pectoris and myocardial infarction.
Sov. med. 19 no.11:24-26 N. '55.   (MLRA 9:1)

1. Iz kafedry vnutrennikh bolezney (zav.-zasluzhennyy deyatel' nauki
prof. M. Kh. Yagubov) Azerbaydzhanskogo instituta usovershenstvovaniya
vrachey (dir. M. I. Aliyev).
        (BLOOD-COAGULATION, in various diseases,
           angina pectoris & myocardial infarct)
        (ANGINA PECTORIS, blood in,
           coagulation)
        (MYOCARDIAL-INFARCTION, blood in,
           coagulation)

USSR/Human and Animal Physiology. Circulation   T-5

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65296

Author   : Gusman S.M.
Inst   : The Azerbaydzhan State Institute for the Advanced Training
           of Physicians.
Title   : Arterial Hypertonus in Pregnant Women

Orig Pub : Sr. tr. Azerb. gos. in-ta usoversh. vrachey, 1957, Vyp. 3,
           78-84

Abstract : No abstract

Card   : 1/1

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65285

Author   : Gusman S.M.
Inst   :
Title   : The Physicochemical Blood Clotting Indices in Acute
           Coronary Insufficiency and Hypertensive Disease

Orig Pub : Azerb. tibb zh., 1957, No 7, 19-22 (azerb.); 86-89 (Russian)

Abstract : In 22 patients with acute coronary insufficiency (angina
           pectoris of infarct), the prothrombin time was considerably
           shortened, while the prothrombin index increased $1\frac{1}{2}$ times.
           In the second and third stages of hypertensive disease the
           index was slightly increased. In all of the patients the
           number of thrombocytes in the blood and the duration of
           bleeding were unchanged. Blood clotting was accelerated
           in patients with coronary insufficiency, especially in cases
           of myocardial infarction. The author recommends the use
           of anticoagulants for this condition.--M.Ya. Mayzelis

Card   : 1/1

GUSMAN, S.M.,prof. (Baku)

Activities of the Azerbaijan Society of Therapeutists in 1955-1956.
Terap. arkh. 29 no.7:78-80 Jl '57.   (MIRA 11:4)
      (AZERBAIJAN--THERAPEUTICS--SOCIETIES)

GUSMAN, S.M., prof., ALEKPEROV, M.A., kand.med.nauk

Artozin therapy in diabetes mellitus. Terap. arkh. 30 no.7:25-37
Jl '58   (MIRA 11:8)

1. Iz kafedry vnutrennikh bolezney Azerbaydzhanskogo instituta
usovershenstvovaniya vrachey.
            (ANTIDIABETICS, ther. use,
                 tolbutamide (Rus))

GUSMAN, S.M., prof., KHALFEN, E.Sh., kand.med.nauk (Baku)

Ballistocardiogram of healthy subjects. Klin.med. 36 no.8:98-105
Ag '58   (MIRA 11:9)

1. Iz kafedry vnutrennikh bolezney (ispolnyayushchiy obyazannosti
zav. kafedry - prof. S.M. Gusman) Azerbaydzhanskogo instituta
usovershenstvovaniya vrachey (dir. M.I. Aliyev).
          (BALLISTOCARDIOGRAPHY,
             of healthy subjects (Rus))

ALLAKHVERDIYEV, A.G., dotsent; KULIYEV, A.Kh., dotsent; GUSMAN, S.M.,
       prof., doktor med.nauk, red.; PLATONOV, B., red.; MIRDZHAFAROV, A.,
       tekhn.red.

[Naphthalan and its therapeutic use] Naftalan i ego lechebnoe
primenenie. Baku, Azerbaidzhanskoe gos.izd-vo, 1959. 186 p.
                                                          (MIRA 14:2)
       (NAPHTALAN--PETROLEUM--THERAPEUTIC USE)

GUSMAN, S.M., prof.; KHALFEN, E.Sh., kand.med.nauk

Clinical significance of a ballistocardiographic study. Azerb.med.
zhur. no.9:36-40 S '59.   (MIRA 13:1)

1. Iz kafedry vnutrennikh bolezney (i.o.zav. kafedroy - prof. S.M.
Gusman) Azerbaydzhanskogo gosudarstvennogo instituta usovershenstvo-
vaniya vrachey (i.o. direktora - dotsent D.B. Mustafayev).
                        (BALLISTOCARDIOGRAPHY)

GUSMAN, S.M., prof.; KHALFIN, E.Sh., kand.med.nauk (Baku)

Ballistocardiographic changes in clinically normal subjects following physical effort and after smoking [with summary in English]. Terap. arkh. 31 no.1:46-52 Ja '59.   (MIRA 12:2)

1. Iz kafedry terapii Azerbaydzhanskogo instituta usovershenstvo-vaniya vrachey.
        (BALLISTOCARDIOGRAPHY,
            eff. of exercis & smoking in normal subjects (Rus))
        (EXERCISE, eff.
            on ballistocardiography in normal subjects (Rus))
        (SMOKING, effects,
            same)

GUSMAN, S.M., prof.; ALEKPEROV, M.A., kand.med.nauk

Functional state of the kidneys in patients with diabetes mellitus treated with artosin. Terap.arkh. no.6:68-72 '61.

(MIRA 15:1)

1. Iz kafedry terapii (zav. - prof. S.M. Gusman) Azerbaydzhanskogo gosudarstvennogo instituta usovershenstvovaniya vrachey.

(ARTOSIN)   (DIABETES)   (KIDNEYS)

GUSMAN, S. M., ITKIN, A. A. and KARAMOV, K. S.

"Case of Defect in the Aortal Valves of Traumatic Origin" - p. 37

Voyenno Meditsinskiy Zhurnal, No. 10, 1962

GUSMAN, S.M., prof.

Atypical myocardial infarcts and classification of their forms.
Terap. arkh. 34 no.10:32-36   D'62   (MIRA 17:4)

1. Iz kafedry terapii (zav. - prof. S.M. Gusman) Azerbaydzhan-
skogo instituta usovershenstvovaniya vrachey.

GUSMAN, S.M., prof.; ALEKPEROV, M.A., kand. med. nauk

Indications for use and the effectiveness of sulfanilamide
preparations in diabetes mellitus. Sovet. med. 26 no.5:
13-18 My'63   (MIRA 17:1)

1. Iz kafedry terapii (zav. - prof. S.M. Gusman) Azerbay-
dzhanskogo instituta usovershenstvovaniya vrachey.

GUSMAN, S.M., prof.

Impressions of the Czechoslovakian Medical Congress. Terap.
arkh. 35 no.5:109-110 My'63   (MIRA 16:12)

KADYMOV, I.G., MAYEV, n.h., [...], radiologiy oaytoo' [...], GUSMAN, S.M.,
prof.; TESLER, Ye.Ya.

On the 70th anniversary of the Dzhaparidze No. 3 Clinical Hospital.
Azerb. med. zhur. 41 no.1:84-85 Ja '64.   (MIRA 17:12)

1. Glavnyy vrach klinicheskey bol'nitsy No. 3 imeni Dzhaparidze, Baku
(for Kadymov).

86173

/L.3000

S/140/60/000/005/006/021
C111/C222

AUTHOR: Gusman, S.Ya.

TITLE: Uniform Approximation of Continuous Functions on Riemannian
Surfaces

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1960,
No. 5, pp. 43 - 51

TEXT: Generalizing a result of S.N. Mergelyan to Riemannian surfaces
the author proves the
Theorem 1 : Let the function $f(P)$ be defined on the closed set E belonging
to a closed Riemannian surface R. In order that $f(P)$ is developable into a
series in terms of rational functions on R with a single pole in the point
Q which on E converges uniformly to $f(P)$ it is necessary and sufficient
that the complement of E consists of a region containing Q, and that $f(P)$
is continuous on E and analytic in every inner point of E.
The sufficiency of the conditions follows as a special case from
Theorem 2 : If the complement of a closed set E with respect to the closed
Riemannian surface R consists of n regions $G_1, \ldots, G_n$ and if $Q_1 \in G_1, \ldots,$
$\ldots, Q_n \in G_n$ are arbitrary points of these regions then every function $f(P)$
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86173

Uniform Approximation of Continuous Functions   S/140/60/000/005/006/021
on Riemannian Surfaces   C111/C222

which is continuous on E and analytic in the interior of E, is developable
into a series in terms of rational functions in R having poles only in
$Q_1, \ldots, Q_n$, where this series converges uniformly to $f(P)$ on E.

From theorem 2 there furthermore follows the :
Theorem 2* : If the complement of E with respect to R consists of the
regions $G_1, \ldots, G_n$, and $Q_1, \ldots, Q_n$ are arbitrary points of these regions then
every $f(P)$ which is regular in the interior of E (with an exception of the
finitely many points $P_1, \ldots, P_m$, where it has poles) and continuous on E
(with an exception of the same points $P_1, \ldots, P_m$) can be developed into a
series in terms of rational functions on R having poles only in $P_1, \ldots, P_m$
and $Q_1, \ldots, Q_n$, where this series converges uniformly to $f(P)$ on E.
From theorem 2* there furthermore follows
Theorem 3 : Let the complement of E with res-pect to R consist of $G_1, \ldots, G_n$.
Let $Q_1 \in G_1, \ldots, Q_n \in G_n$ be points of the $G_1, \ldots, G_n$. Let $dg(P)$ be a

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Uniform Approximation of Continuous Functions   S/140/60/000/005/006/021
on Riemannian Surfaces   C111/C222

differential continuous on E and analytic in the inner points. Then for
every fixed finite covering of R by cells and for every $\varepsilon > 0$ there exists
an Abelian differential $dh(P)$ on R having poles only in $Q_1, \ldots, Q_n$ and
satisfying the inequation :

$$\max_{P \in E} \left| \frac{dg(P)}{dz} - \frac{dh(P)}{dz} \right| < \varepsilon \quad .$$

The present paper was written under the leading of Professor L.I.
Volkovyskiy.

There are 2 figures and 9 references : 5 Soviet, 1 Finnish, 2 German and
1 Japanese.

ASSOCIATION: Permskiy gosudarstvennyy universitet imeni A.M. Gor'kogo
               (Perm' State University imeni A.M. Gor'kiy)

SUBMITTED: September 23, 1959

Card 3/3

68594

16(1) /6.3000

S/020/60/130/05/002/061

AUTHOR: Gusman, S. Ia.

TITLE: Uniform Approximation of Continuous Functions on Riemannian
             Surfaces

PERIODICAL: Doklady Akademii nauk SSSR,1960,Vol 130,Nr 5,pp 963-965(USSR)

ABSTRACT: Theorem 1: Let the function $f(P)$ be defined on the closed set
             E of the closed Riemannian surface R. In order that $f(P)$ can
             be expanded into a series in terms of functions rational on R
             with a single pole in Q, and that the series converges uniform-
             ly on E to $f(P)$, it is necessary that the complement of E con-
             sists of a single domain containing Q, while $f(P)$ is con-
             tinuous on E and analytic in each interior point of E.
             Theorem 2: Let the complement of the closed set E with respect
             to the closed Riemannian surface R consist of the domains
             $G_1,G_2,\ldots,G_n$; let $Q_1,Q_2,\ldots,Q_n$ be arbitrary points of these
             domains. Then every unique function $f(P)$, which is continuous
             on E and analytic in the interior points of E, can be expanded
             into a series in terms of functions which are rational on R
             and possess poles only in the points Q_i; the series converges
             uniformly on E to $f(P)$.

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Uniform Approximation of Continuous Functions on   S/020/60/130/05/002/061
Riemannian Surfaces

Theorem 3: As in theorem 2 the complement of E is assumed to consist of $G_1, \ldots, G_n$ with the points $Q_1, \ldots, Q_n$. Let $dg(P)$ be a differential which is regular and continuous in every interior point of E, except in the finite set of the points $P_1, \ldots, P_m$, where it possesses poles. Then to every finite covering of R and to every $\varepsilon > 0$ there exists an abelian differential $dh(P)$ on R which possesses poles only in P_i and Q_k and which satisfies the inequality

$$\max_{P \in E} \left| \frac{dg(P)}{dz} - \frac{dh(P)}{dz} \right| < \varepsilon$$

Theorem 4 : If the plane measure of the continuum E on R is equal to zero, then every function $f(P)$ continuous on E can be represented as a series $\sum\limits_{n=1}^{\infty} R_n(P)$ uniformly convergent on E, where

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Uniform Approximation of Continuous Functions on   S/020/60/130/05/002/061
Riemannian Surfaces

$R_n(P)$ are rational functions on R.

S.N. Mergelyan, M.A. Lavrent'yev and M.V. Keldysh are mentioned;
the author thanks Professor L.I. Volkovyskiy for the guidance
of the paper.
There are 3 references, 1 of which is Soviet, 1 German, and
1 Japanese.

PRESENTED: October 21, 1959, by M.A. Lavrent'yev, Academician
SUBMITTED: October 12, 1959

Card 3/3

GUSMAN, S.Ya.; RODIN, Yu.L.

Kernel of a Cauchy type integral on closed Riemann surfaces. Sib.
mat. zhur. 3 no.4:527-531 Jl-Ag '62.   (MIRA 15:7)
    (Integrals, Generalized)   (Riemann surfaces)

L 3203-66   EWT(d)   IJP(c)

ACCESSION NR: AP5015718   UR/0022/64/017/005/0003/0006   /6

AUTHOR: Gusman, S. Ya.   /3

TITLE: Existence of regular solutions to Cauchy-Riemann systems with nonlinear right-hand members

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 17, no. 5, 1964, 3-6

TOPIC TAGS: Riemannian geometry, analytic function

Abstract: The author developes three theorems on the existence of certain classes of solutions to systems of the type in question.
The system of equations

$$\begin{cases} \dfrac{\partial u}{\partial x} - \dfrac{\partial v}{\partial y} = f_1(x, y, u, v) \\ \dfrac{\partial v}{\partial x} + \dfrac{\partial u}{\partial y} = f_2(x, y, u, v) \end{cases}$$

is written in the form of a single equation

$$w_{\bar{z}} = a(z, w), \qquad (1)$$

Card 1/4

L 3203-66

where $\qquad z = x + iy, \quad w = u + iv, \quad a(z, w) = \frac{1}{2}(f_1(x, y, u, v) +$

$$+ if_2(x, y, u, v)).$$

Equation (1) and its solutions have been thoroughly studied by I. N. VEKUA (Obobshchennyye analiticheskiye funktsii, Fizmatgiz, Moscow, 1959) for the case $a(z, w) = a(z) + b(z)\bar{w} + c(z)$, where $a(z)$, $b(z)$, and $c(z)$ belong to $L_p(\bar{D})$ or L_p, 2, $p > 2$. This paper is devoted to the more general case in

which $a(z, w)$ is discontinuous with respect to w for any $z \in \bar{D}$, where $\bar{D}$ is the closure of region D, measurable with any discontinuous $w(z)$, and satisfies the inequality

$$|a(z, w)| \leqslant a(z)(|w| + 1)^\varepsilon (\ln(|w| + 2))^\varepsilon,$$

where $a(z)$ belongs to $L_p(\bar{D})$ or $L_{p,2}$, if region D is unbounded, $p > 2$. If D is a region of Riemannian surface R, then $a(z, w)$ must be a coordinate of the form

$$a(z^*, w) = a(z, w)\frac{d\bar{z}}{dz^*}.$$

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$a(z)$ in this case varies by the law $a(z^*) = a(z) \left| \dfrac{dz}{dz^*} \right|$.

The function $w(z)$ is termed a "regular" solution of Equation (1) if it possesses almost everywhere a generalized derivative and if it satifies Equation (1).

Theorem 1 (D is the complex plane): With $\alpha < 1$, and also with $\alpha = 1$ and $\beta < 0$,

there exists a regular solution to Equation (1) which assumes a given value W_0 at a given point z_0. (It should be noted that the conditions of Theorem 1 do not imply the uniqueness of the solution).

Theorem 2 (D is a bounded flat region or a region on a closed Riemannian surface): If $P_1, \ldots, P_n$ are points of D, while $w_1, \ldots, w_n$ are arbitrary complex numbers, then with $\alpha < 1$ and also with $\alpha = 1$ and $\beta < 0$, there exist single-values solutions to Equation (1) which assume at every point P_k the value w_k, $k = 1, \ldots, n$.

Theorem 3 (same assumption for D as in 2): If the sequence $\{w_n(z)\}_k$ of regular solutions to Equation (1) converges uniformly in D toward $w(z)$ then $w(z)$ is a regular solution of that equation.

Theorems 2 and 3 hold for an arbitrary open Riemannian surface D, provided $a(z)$ has a compact medium. If D is a closed Riemannian surface, then even the equation

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L 3203-66

ACCESSION NR: AP5015718

$$\frac{W}{z} = a(z)$$

has no regular solutions in the general case.

Orig. art. has 9 formulas.

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm' State University)

SUBMITTED: 20Jan64   ENCL: 00   SUB CODE: MA

NO REF SOV: 004   OTHER: 000   JPRS

Card 4/4

L 31554-66   EWT(m)/EWP(j)/T   IJP(c)   RM

ACC NR: AP6005112   (N)   SOURCE CODE: UR/0316/65/000/005/0074/0076

AUTHOR: Serebryakov, B. R.; Gusman, T. Ya.; Shnulin, A. N.

ORG: VNIIolefin

TITLE: Electrical conductivity of bismuth molybdates

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 5, 1965, 74-76

TOPIC TAGS: electric conductivity, bismuth compound,   molybdate,
forbidden zone width, activation energy, catalysis, oxidation ,
dehydrogenation , x ray analysis

ABSTRACT: A study was made of the electrical conductivity of fused and shaped samples of
bismuth-molydenum catalysts used in a number of oxidative processes (oxidation of propylene
to acrolein, oxidative dehydrogenation of butylenes to bivinyl, oxidative ammonolysis of propy-
lene to acrylonitrile). X-ray analysis established the structure of the samples as $(Bi_2O_3)_x$
$(MoO_3)_y$. Their electrical resistance was measured at 290—500C (range in which
the catalytic properties are best manifested) with an E6-3 tube teraohmmeter. Particular
emphasis was placed on the determination of the activation energy of conduction (i. e., on the
determination of the forbidden gap width E_g). The Bi_2O_3-MoO_3 catalysts were found to have
n-type conductivity. It was established that the activation energy of the oxidation of propylene
to acrolein (and oxidative ammonolysis of propylene to acrylonitrile) and the activation energy
of the electrical conduction of bismuth molybdates are approximately equal. The forbidden gap
width of the Bi_2O_3-MoO_3 system changes only slightly with changing composition and is equal

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L 31554-66

ACC NR: AP6005112

to an average of 0.96 eV. The authors are deeply grateful to K. Mekhtiyev, who performed the x-ray structural analysis of the samples. Orig. art. has: 2 figures.

SUB CODE: 07,20/SUBM DATE: 12Nov64 / ORIG REF: 003

Card 2/2

600. THE PATHO-ANATOMICAL CHANGES IN THE EYE IN PULMONARY
    TUBERCULOSIS (Russian text) - Gusman V. S. - SBORN. TRUD.
    AZERBAIIAN. OFTAL. INST. 1956, 1 (131-135)
Eighteen eyes of 9 individuals aged 20-60 yr., who had died from a haematogenous
dissemination of tb were studied. Destructive-proliferative changes were dis-
covered in all the eyes; the author considers these changes referable to toxaemia
and the changed reactivity of the organism. The findings were revealed by micro-
scopic examination of eye preparations stained by various methods.   (S)

ABAYEV, G.N.; GUSMAN, T.Ya.

Determination of the rate of the beginning of fluidization
of some catalysts. Khim.prom. no.11:796-798 N '62. (MIRA 16:2)
            (Fluidization)   (Catalysts)

GUSMAN, Ye.A. (Leningrad)

Practices of a district accident station. B.A. Gusman.
Ortop.travm. i protez 19 no.2:54 Mr-Ap '58   (MIRA 11:5)
        (FIRST AID IN ILLNESS AND INJURY)

L 56475-65   EMT(d)   Pg-4   IJP(c)

AUTHOR: Gusman, Yu. A. (Leningrad); Oganesyan, L. A. (Leningrad)

TITLE: Convergence estimates of finite difference methods for degenerate elliptic equations

TOPIC TAGS: elliptic differential equation, boundary value problem, approximation method

ABSTRACT: Variational methods are applied to the solution of the following two boundary value problems connected with the equation

$$Lu = -\frac{\partial}{\partial x}\left[p(x, v)\frac{\partial u}{\partial x}\right] - \frac{\partial}{\partial v}\left[v^2 q(x, v)\frac{\partial u}{\partial v}\right] = f(x, v) \quad (1)$$

(1) To find a solution satisfying the condition $u|_{\Gamma} = 0$

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ACCESSION NR: AP5009399

(2) To find a solution satisfying the condition $u|_{\Gamma} = 0$, $y^\alpha(\partial u/\partial y) \to 0$ as $y \to 0$.
The following scalar product is defined:

$$(u, v) = \int\limits_a \int \{uv + [u_x v_x + (y^{\alpha/2}u_y)(y^{\alpha/2}v_y)] + [u_{xx}v_{xx} + 2(y^{\alpha/2}u_{xy})(y^{\alpha/2}v_{xy})] +$$
$$+ (y^\alpha u_y)_y (y^\alpha v_y)_y]\} dx\, dy.$$

The norm of u on the space $W^2_{2,a}$ is

$$\| u \|^2_{W^2_{2,a}} = \left\{ \int\limits_a \int (u^2 + [u_x^2 + y^\alpha u_y^2] + [u_{xx}^2 + 2y^\alpha(u_{xy})^2 + (y^\alpha u_y)_y^2]) dx\, dy \right\}^{1/2}.$$

The function $u \in W^2_{2a}$ is a generalized solution of (1) if a sequence of functions
$u_n \in M$, can be found such that when $n \to 0$, $\|u - u_n\|_{W^2_{2,a}} \to 0$, where u_n is a solution of

$$-\frac{\partial}{\partial x} p \frac{\partial u_n}{\partial x} - \frac{\partial}{\partial y} \left[y^\alpha q \frac{\partial u_n}{\partial y} \right] = G_n.$$

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Using the method of extension along a parameter, it can be shown that the general-
ized solution u exists uniquely and that the following holds:

$$\|u\|_{W^1_{2,\alpha}} \leqslant C\|f\|_{L_2}$$

The discovery of approximate solutions for the above boundary value problems re-
duces to the problem of finding the function u_0 for which the following integral is
a minimum:

$$F(u) = \iint_S p[(u_x)^2 + u^2 q(u_y)^2]dxdy - 2\iint_S fudxdy$$

Orig. art. has: 43 formulas.

ASSOCIATION: none

SUBMITTED: 29Jul64   ENCL: 00   SUB CODE: MA

NO REF SOV: 003   OTHER: 001

Card 3/3

GUSMANOV, G.

Work of a rural district hospital. Zdrav.Turk 2 no.6:39-41
N-D '58.   (MIRA 16:3)

1. Glavnyy vrach uchastkovov bol'nitsy sel'skogo soveta Okuz-
Yab Tashauzskoy oblasti.
                        (HOSPITALS, RURAL)

GUSNIN, S.I., dots., kand. tekhn. nauk.

Computation of earthwork volumes by means of special signs without pegging out the net of squares. Trudy MIIGAIK no.27:79-84 '57.

(MIRA 11:1)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii, aero-fotos"yemki i kartografii.

(Earthwork)   (Surveying)

Gusnin, S I.

3(2)

PHASE I BOOK EXPLOITATION   SOV/2152

Moscow. Institut inzhenerov geodezii, aerofotos"yemki i kartografii

Trudy, vyp. 33 (Transactions of the Moscow Institute of Engineering Geodesy, Aerial Photography,and Cartography, Nr 33) Moscow, Geodezidat, 1958. 123 p. 1,000 copies printed.

Editorial Board: A.I. Mamishvili (Resp. Ed.), V.I. Ateyvich (Deputy Resp. Ed.), G.V. Bagratuni, N.Ya. Bobir, N.M. Volkov, A.I. Durnev, I.V. Yeliseyev, F.S. Zakatov, A.S. Lavchuk, M.I. Modrinskiy, B.D. Solov'yev, B.V. Perliov, and P.F. Shokin; Ed. of Publishing House: A.I. Kosesutseva; Tech. Ed.: V.V. Romanova.

PURPOSE: This issue of the Institute's Transactions is intended for geodesists, photogrammetrists,and cartographers.

COVERAGE: This collection of articles covers a variety of problems and questions of interest to personnel in the mapping field. Several instruments employed in cartography are investigated and evaluated. These include a photosertograph, the Photo Reductor MIKGAIK, and

Transactions of the Moscow Institute (Cont.)   SOV/2152

marine chronometers. Other subjects treated include Stokes' formula, correction of instrumental errors, Dellen's Method, relief generalization, aerial camera orientation,and others. References accompany individual articles.

Genoin, S.I. Conversion of Kolier (to Graphic) by the Method of Nuclear Projection   41

Blutoom, I.M. The Use of a Correlation Ellipse as a Charac-
teristic Curve for a Series of Geodetic Measurements   49

Zakatov, F.F. Constructing Conical Sections by Means of a Central Projection   55

Zimin, Ya.L. Automation of the Azimuthal Orientation of an Aerial Camera   59

Rameev, A.V. Some Problems in Mapping Economics   63

Gerbakov, Yu.V., and K.I. Kibalyan. Evaluation of the Photo Reductor MIKGAIK   71

Dandoykov, V.M. A New Method of Instrumental Approach to an Aerial Survey Flight Line   79

Gurevich, V.I. Testing and Evaluation of the Marine Chrono-
meters Manufactured by the Itata Clock Factory in Kirova   93

Gurevich, V.I. Some Problems in Evaluating the Accuracy of a Series of Measurements of Equal Precision   99

Monakhov, G.I. A Method of Establishing Micro-triangula-
tion for Detailed Construction (Building) Nets   113

Bulinkiy, Ye.F. Comments to (on) Critical Observations of Docent N.A. Girshberg   121

Girshberg, N.A. Comments on Ye.F. Bestitakiy's Letter   123

AVAILABLE: Library of Congress

Card 6/6

BM/od
8-12-59

12

GUSNIN, S.I., dots., kand. tekhn.nauk

Field method of planning relief transformations. Trudy MIIGAIK
no.33:41-47 '58.   (MIRA 12:8)

1.Kafedra geodezii Moskovskogo instituta inzhenerov geodezii,
aerofotos"yemki i kartografii.
                    (Surveying)

USSR / Farm Animals.   Cattle.   Q-2

Abs Jour: Ref Zhur-Biol., No 12, 1958, 54728.

Author   : Guseynov, S. I., Gusniyev, M. A.
Inst   : Not given.
Title   : The Histological Structure of the Muscle Fibers
           of the Mountain Cattle of Dagestan.

Orig Pub: Tr. In-ta, zhivotnovodstva. Dagest. fil. AN SSSR,
           1956, 4, 64-67.

Abstract: The average diameter of the muscle fibers of the
           mountain cattle of Dagestan was found to be
           40.64 .

Card 1/1

16

GUSNIYEV, M.A.; FEDORCHENKO, I.V.

Three-way mercury manometer with a recording lever. Fiziol.
zhur. 45 no.8:1032-1033 Ag '59.   (MIRA 12:11)

1. From the department of physiology, Dagestan Medical Institute,
Makhatchkala.
                (MANOMETRY, equipment & supplies)

MUSALOV, G.G.; GUSNIYEV, M.A.

"Manual for independent practical work in a course of normal
physiology." Reviewed by G.G.Musalov, M.A.Gusniev. Fiziol.
zhur. 46 no.12:1516-1517 D '60.   (MIRA 14:1)

1. Dagestanskiy meditsinskiy institut, Makhachkala.
        (PHYSIOLOGY—STUDY AND TEACHING),
        (MUSALOV, G.G.)   (GUSNIYEV, M.A.)

GUSNIYEV, M.A.; MUSALOV, G.G.; KIRIAKIDI, L.M.

Kymograph with the time register. Lab. delo 7 no.12:43-44 D '61.
(MIRA 14:11)

1. Dagestanskiy meditsinskiy institut, Makhachkala.
(KYMOGRAPH)

GUSNIYEV, M.A.; MUSALOV, G.G.; KIRIAKIDI, L.M.

Three-way mercury dynamograph. Fiziol. zhur. 47 no.12:1505-1507 D
'61.   (MIRA 15:1)

1. From the Department of Physiology, Dagestan Medical Institute,
Makhatchkala.
                              (MANOMETER)

ZAYDIYEVA, Z.N.; GUSNIYEVA, Sh.A.

Immediate and late results of using obstetric forceps in delivery.
Vop. okh. mat. i det. 8 no.7:89   Jl '63.   (MIRA 17 2)

1. Iz kafedry akusherstva i ginekologii Dagestanskogo meditsinskogo
instituta.

SOV/136-58-12-19/22

AUTHORS: Gusov, A.V. and Kaydak, A.M.

TITLE: Boiling-layer   Roasting (K voprosu ob obzhige v kipyashchem sloye)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 12, pp 83 - 84 (USSR)

ABSTRACT: The authors of this letter to the editor severely criticise the article by G.M. Gusev and Ya.N. Shvartsman published in "Tsvetnyye Metally", 1958, Nr 4.   They consider that those authors were incorrect in deducing that particle distribution occurs by laws other than those which hold for highly turbulent liquids.   The widely-held view that such laws apply has been confirmed by special experiments on particle motion in a   boiling-layer. .   G.M. Shteyngart (Ref 2) has shown that de-sulphurisation occurs throughout the whole volume of the fluidised bed and Gusev and Shvartsman have misinterpreted the gas-sampling investigation carried out at the "Elektrotsink" Works and used defective equipment for their own tests.   Although the authors of the criticised article were present at the works during trials of a method of charging the concentrate deep into the bed and know of its defects, they continue to recommend it;   their advocacy of charging by injection

Card 1/2

Boiling-layer   Roasting   SOV/136-58-12-19/22

> over the layer contradicts their own views. The authors
> maintain that Gusev and Shvartsman gave a confusing
> answer to a question of Burov on temperature distribution
> and cite experimental evidence to show that a deeper bed
> is advantageous. Among other points criticised are the
> following: recommendation of a complicated discharge
> system when the available simple one is satisfactory; the
> statement that SO_2 concentrations in gas from fluidised beds
> of over 7-8.5% could not be attained and that processes
> occurring above the bed were ignored at the "Elektrotsink"
> Works. There are 2 Soviet references.

ASSOCIATION: Zavod "Elektrotsink" ("Elektrotsink" Works)

Card 2/2

ALEKSEYEV, B.D.; ALAVERDOV, A.I.; BABIN, I.D.; BIDNEV, A.I.; BUROVOY, I.A.;
GUSOV, A.V.; IVANOV, V.I.; KAYDAK, A.M.; LEYZEROVICH, G.Ya.; KUPPUL',
V.K.; SEREBRYANNIKOV, B.Ya.; SHTEYNGARDT, G.M.

Roasting zinc concentrate in a gas fired boiling fuel bed.   Prom.
energ. 13 no.8:19-20 Ag '58.   (MIRA 11:10)
                    (Zinc--Metallurgy)

CA Gusov, S.G.

24

The danger of fire from the valves of oxygen cylinders.
V. S. Chernyak and S. G. Gusov. Intenense Delo 1947,
No. 1, 17-21; Chem. Zentr. (Russian Zone Ed.) 1948, II,
1230. —Packing of fiber, ebonite, etc., should be of very
pure materials and is best replaced by plastic material.

The internal parts of the valve should be of nonferrous
metal.   M. G. Moore

GUSOV, S.G.; SPEKTOR, O.Sh.

Remarks on the review of K.K. Khrenov, M.M. Bort and
A.D. Kotvitskii's article entitled "Low-pressure oxygen cutting
of large thicknesses." Svar. proizv. no.4:29-30 Ap '57.

(MLRA 10:5)

(Gas welding and cutting)

(Khrenov, K.K.) (Bort, M.M.) (Kotvitskii, A.D.)

GUSOVSKIY, A., master proizvodstvennogo obucheniya

We are developing technical intelligence. Prof.-tekh. obr. 22
no. 1:23-24 Ja '65.   (MIRA 18:4)

1. Professional'no-tekhnicheskoye uchilishche No.2, Khar'kov.

GUSOVSKIY, A., referent

Equipment for the continuous casting of steel. Metallurg
8 no.2:22-24 F '63.   (MIRA 16:2)
          (Germany, West—Continuous casting)

GUSOVSKIY, A.

Improve the operation of superhigh capacity blast furnace
Metallurg 8 no.10:12-13 O '63.   (MIRA 16:12)

GUSOVSKIY, A.A.; GONCHAROVA, L.A., red.izd-va; OBUKHOVSKAYA, G.P.,
tekhn. red.

[Pelletizing of iron ores] Okuskovanie zheleznykh rud.
Moskva, Metallurgizdat, 1963.   60 p.   (MIRA 16:5)
        (Iron ores) (Sintering)

KIRSANOV, I.P.; ORLOVSKIY, Ya.A.; GUSOVSKIY, A.A.; KIRSANOV, I.P.;
PARTSEVSKIY, A.B.

From science and technology in foreign countries; abstracts.
Ogneupory 28 no.7:333-335 '63.   (MIRA 16:9)

ARUTYUNOV, N.B., inzh., red.; VOSKOBOYNIKOV, V.G., doktor tekhn.
nauk, red.; GOTLIB, A.D., prof., doktor tekhn.nauk, red.;
GUSOVSKIY, A.A., inzh., red.; KRASAVTSEV, N.I., kand. tekhn.
nauk, red.; NEKRASOV, Z.I., akademik, red.; OSTROUKHOV, M.Ya.,
kand. tekhn. nauk, red.; POKHVISNEV, A.N., prof., doktor
tekhn.nauk, red.; RAMM, A.N., prof., doktor tekhn. nauk, red.;
TSYLEV, L.M., prof., doktor tekhn. nauk, red.; POZDNYAKOV,
G.L., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Blast furnace process according to most recent developments;
on the 100th. anniversary of Academician M.A.Pavlov's birth]
Domennyi protsess po noveishim issledovaniiam; k 100-letiiu so
dnia rozhdeniia akad. M.A.Pavlova. Moskva, Metallurgizdat,
1963.   325 p.   (MIRA 16:8)

1. AN Ukr.SSR (for Nekrasov).
       (Blast furnaces)
    (Pavlov, Mikhail Aleksandrovich, 1863-1958)

GUGOVSKIY, V.I.; IVANOVA, N.I., [illegible], A.[illegible], [illegible], J."

Injection burners of the State All-Union Design and Planning
Institute of the Ministry of Ferrous Metallurgy. Gaz. prom.
9 no.11:17-21 '64.   (MIRA 17:12)

S/276/63/000/002/020/052
A052/A126

AUTHORS: Gusovskiy, V.L., Ivanova, N.I., and Lifshits, A.Ye.

TITLE: Stal'proyekt standard injection burners

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no.2,
              1963, 66-67, abstract 2B310 (Sb. tr. Gos. soyuzn. in-t po
              proyektir. agregatov staleliteyn. i prokatn. proiz-va chern.
              metallurgii, no. 2, 1962, 78-87)

TEXT: It is reported on the revision carried out by Stal'proyekt
in 1960-1961 of specifications of standard injection burners employed in
hardening furnaces and other heating units. As a result of the revision
all injection burner designs were reduced to 3 standard series П,В and Н
(P, V, and N). A table of design dimensions of P, V and N-type burners is
presented as well as diagrams of their efficiency and rated operational
conditions of standard burners. There are 4 figures.

                                        T. Kislyakova

(Abstracter's note: Complete translation.)

Card 1/1

GUSOVSKIY, V.L.; LIFSHITS, A.Ye.; TYMCHAK, V.M.

Review of the book "Continuous heating furnaces." Stal' 24
no.12:1144 D '64.   (MIRA 18:2)

1. Gosudarstvennyy soyuznyy institut po proyektirovaniyu agregatov
staleliteynogo i prokatnogo proizvodstva dlya chernoy metallurgii.

GUSOVSKIY, V.L.; LIFSHITS, A.Ye.; TIMCHAK, V.M.

Combustion of natural gas. Book by A.V. Arseyev; review. Stal'
25 no.4:373 Ap '65.   (MIRA 18:11)

GUSOVSKIY, Ya.M.

Pathomorphological changes in the brain in tumors in the region of
the third ventricle. Zhur.nevr.i psikh. 59 no.9:1049-1056 '59.

(MIRA 12:11)

1. Patogistologicheskaya laboratoriya (zav. Ya.M. Gusovskiy) Ukrain-
skogo nauchno-issledovatel'skogo instituta okhrany materinstva i det-
stva (dir. M.D. Burova) i patogistologicheskaya laboratoriya (zav. -
prof. B.S. Khominskiy) Instituta neyrolhirurgii (dir. - prof. A.I.
Arutyunov) Ministerstva zdravookhraneniya USSR, Kiyev.
        (CEREBRAL VENTRICLES neoplasms)
        (BRAIN pathol.)

GUSOVSKIY, Ya. M., Cand Med Sci -- (diss) "Patnomorphological changes in the brain during tumors of the area of the third ventricle." Chernov- tsy, 1960. 16 pp; (Chernovtsy State Medical Inst); 200 copies; price not given; (KL, 21-60, 129)

KHVUL', G.M. [Khvul', H.M.]; GUSOVSKIY, Ya.M. [Husovs'kyi, IA.M]; VENDT, V.P.

Influence of large doses of various preparations of vitamin D on
the rise of hypervitaminosis under experimental conditions. Ped.,
akush. i gin. 22 no.4:30-33 '60.   (MIRA 14:5)

1. Ukrains'kiy naukovo-goslidniy institut OKhMD im. Geroya Radyans'-
kogo Soyuzu prof. P.M.Buyka (direktor - zasluzh.likar URSR M.D.
Burova) ta Institut biokhimii AN URSR (direktor - akad.O.V.Palladin).
        (HYPERVITAMINOSIS)   (VITAMINS--D)

KHVUL', A. M.; GUSOVSKIY, Ya. M.; VENDT, V. P.

Development of hypervitaminosis D after administration of synthetic
vitamin D preparations. Pediatriia no.11:34-39 '61.
                                              (MIRA 14:12)

1. Iz Ykrainskogo nauchno-issledovatel'skogo instituta okhrany
materinstva i detstva imeni Geroya Sovetskogo Soyuza prof. P. M.
Buyko (dir. kandidat meditsinskikh nauk A. G. Pap)

       (VITAMINS—D)   (HYPERVITAMINOSIS)

STEPANKOVSKAYA, G.K. [Stepankovs'ka, H.K.], kand.med.nauk; GUSOVSKIY, Ya.M.
   [Husovs'kyi, IA.M.], nauchnyy sotrudnik

   Some causes of injuries to the cervix uteri during labor. Ped.,
   akush. i gin. 22 no.5:47-49 '60.   (MIRA 15:6)

   1. Akusherskiy otdel (zav. - prof. S.P. Vinogradova [Vynohradova,
   S.P.]) i patogistalogicheskaya laboratoriya (zav. - nauchnyy
   sotrudnik Ya.M. Gusovskiy [Husovs'kyi, IA.M.], konsul'tant -
   prof. N.O. Maksimovich [Maksymovych, N.O.] Ukrainskogo nauchno-
   issledovatel'skogo instituta okhrany materinstva i detstva im.
   Geroya Sovetskogo Soyuza prof. P.M. Buyka (direktor - zasluzhennyy
   vrach M.D. Burova, nauchnyy rukovoditel' - deystvitel'nyy chlen
   AMN SSSR prof. A.P. Nikolayev).
                     (LABOR, COMPLICATED)
                  (UTERUS—WOUNDS AND INJURIES)

GUSPAN, Jan, inz. CSc.

Results of the research on improvement of heavy soils in Hungary.
Vest ust zemedel 12 no.4:156-.58 '65.

1. Research Institute of Land Improvement, Worksite Bratislava.

GUSPAN, Jan, inz.

Activities of the Plant Production Research Institute in
Piestany. Vestnik vyzk zemedel 9 no.9:457-459 '62.

1. Riaditel Vyskumneho ustavu rastlinnej vyroby, Piestany.

GUSPAN, Jan, inz.; RAVAS, Jan

Result of the research on sowing some main crops on fields
used for forage plant cultivation for several years. Rost
vyroba 9 no.3/4:391-398 Mr-Ap '63.

1. Vyzkumny ustav rastlinnej vyroby, Piestany.

GUSS, R. Yu.

21069   GUSS, R. Yu. Posle rayonirovaniya (K odnorodnym posadkam
semenovodstva viki) Selektsiya i semenovodstvo, 1949, no 7,
s. 56 -59.

SO: Letopis' Zhurnal'nykh Statey, no. 29, Moskva, 1949

L 00896-67   EWT(d)/EWT(m)/EWP(f)/T-2   WE

ACC NR: AP6014350   (A)   SOURCE CODE: UR/0113/65/000/012/C003/0005

AUTHOR: Gussak, L. A. (Candidate of technical sciences); Gussak, D. A.

ORG: Institute of Chemical Physics AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: New design for a precombustion engine

SOURCE: Avtomobil'naya promyshlennost', no. 12, 1965, 3-5

TOPIC TAGS: internal combustion engine, engine ignition system, combustion chamber

ABSTRACT: In view of the problems involved in application of present designs of pre-
ignition systems to small engines, a new design is proposed which eliminates the pre-
combustion valve and its actuating mechanism. A diagram of the engine is shown in the
figure (card 2). The precombustion chamber 1 is formed by the projection on the piston
2 as it approaches TDC. The temporarily disconnected precombustion chamber is connec-
ted to the main combustion chamber by short bypass valves drilled through the projec-
tion on the piston. The composition of the working mixture is unevenly distributed
through the combustion chamber by introducing the working charge in layers. Pure air
is drawn into the cylinder during intake through air line with butterfly valve 3 and
the cylinder intake valve. A rich fuel mixture is introduced at the same time through
the same valve from carburetor 4 along channel 5 which is located close to the open
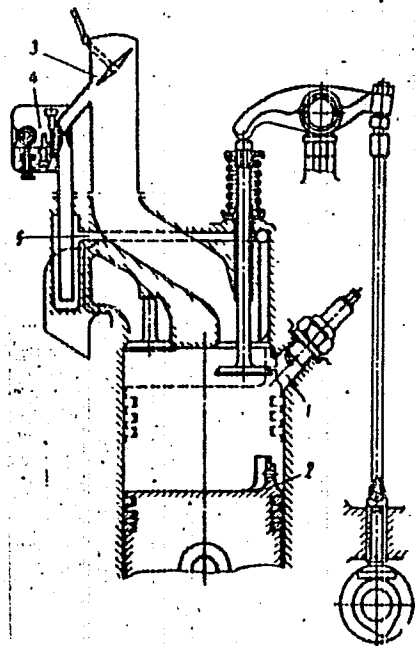precombustion chamber. The air is mixed with the fuel and vaporized to form the ex-

Card 1/3   UDC: 621.431.73.001.5

L 00896-67

ACC NR: AP6014350

plosive mixture. Engine power is regulated depend-
ing on the load by varying the quantity of air and
fuel introduced into the cylinder. This is done by
regulation of the butterfly valve which controls
both the air line and the carburetor. The combus-
tion process and operating cycle of the engine were
studied in detail at the Institute of Chemical Phy-
sics AN SSSR on a single-cylinder CFR engine at
various crankshaft speeds and degrees of compression
and with various cubic contents for the precombus-
tion chamber, cross sections for the bypass valves
and forms of the main combustion chamber. The re-
sults show that spark ignition is normal as well as
flame front formation and propagation. The combus-
tion process in the main combustion chamber is ef-
fective and stable. The engine operates without
knocking when the butterfly valve is wide open under
conditions of maximum torque on B-70 gasoline" in
mixtures close to the theoretical composition at op-
timum ignition advance angles approximately 10 units
below those for spark ignition. The engine has 15%
more power than carburetor precombustion engines

Card 2/3

L 00896-67

ACC NR: AP6014350   0

with permanently disconnected precombustion chamber. Orig art. has: 5 figures.

SUB CODE: 21, 13/   SUBM DATE: none

awm

Card   3/3

L 18824-63   EPR/EPF(c)/EWT(m)/BDS   AFFTC/RPL   Ps-4/Pr-4   WW/JW
ACCESSION NR: AP3001510   S/0025/63/000/004/0064/0064

AUTHOR: Gussak, L., Candidate of Technical Sciences, Senior Scientific
Collaborator, Academy of Sciences SSSR

TITLE: Antechamber combustion
          Vol #3C

SOURCE: Nauka i zhizn', no. 4, 1963, 64

TOPIC TAGS: chemically active product, incomplete combustion, chemical lighter,
free radical, cancerogenic substance, carcinogen, combustion

ABSTRACT: The author has formulated a new principle of ignition and combustion:
the working mixture is ignited, not by a flame, but by a flare of chemically active
products of the incomplete combustion of an auxiliary mixture. To keep the mixture
from burning up entirely, it is deprived of half the oxygen. Then the atoms rush
out of the antechamber in an extremely excited state and impart all their energy
to the molecules of the main portion of the fuel. Each of the free radicals and
atoms becomes a "chemical lighter." Ignition does not proceed along a front, but
at once in a multitude of foci scattered throughout the volume, and becomes more
stable. The new method has been successfully applied to gasoline engines turned
out by the Gorky Automobile Factory. As compared with the conventional spark-

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ACCESSION NR: AP3001510 /

ignition motors, it has the following advantages: The combustion rate is increased 3-4 times, which permits one to lower the octane rating by 10 units or raise the degree of compression. Fuel consumption is reduced by 15%. The specific capacity of the engine is increased more than 10%. Underburning is eliminated and no poisonous products of incomplete combustion are discharged into the air. The exhaust gases contain 15-20 times less cancerogenic substances. Orig. has a very good photograph-like diagram with tridimensional effect.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics of the Academy of Sciences SSSR)

SUBMITTED: 00	DATE ACQ: 10Jun63	ENCL: 00
SUB CODE: FL	NO REF SOV: 000	OTHER: 000

Card 2/2

GUSSAK, L.A., kand.tekh.nauk

Exhaust gases can be rendered harmless; new method of precombustion
chamber-torch ignition. Priroda 53 no.3:82-86 '64.   (MIRA 17:4)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

ZHABOTINSKIY, A.M.; MALENKOV, A.G.; YASINOV, H.M.; GUSSAK, L.A.; SHABAD, L.M.

Content of cancerogenic and toxic combustion products in exhaust
gases of combustion engines with spark and antichamber-torch
ignition. Izv. AN SSSR. Ser. biol. no.6:908-912 N-D '64.
(MIRA 17:11)

1. Institute of Chemical Physics, U.S.S.R. Academy of Sciences
and Institute of Experimental and Clinical Oncology, U.S.S.R.
Academy of Medical Sciences.

L 00896-67   EWT(d)/EWT(m)/EWP(f)/T-2   WE

ACC NR: AP6014350   (A)   SOURCE CODE: UR/0113/65/000/012/0003/0005

AUTHOR: Gussak, L. A. (Candidate of technical sciences); Gussak, D. A.

ORG: Institute of Chemical Physics AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: New design for a precombustion engine

SOURCE: Avtomobil'naya promyshlennost', no. 12, 1965, 3-5

TOPIC TAGS: internal combustion engine, engine ignition system, combustion chamber

ABSTRACT: In view of the problems involved in application of present designs of pre-
ignition systems to small engines, a new design is proposed which eliminates the pre-
combustion valve and its actuating mechanism. A diagram of the engine is shown in the
figure (card 2). The precombustion chamber 1 is formed by the projection on the piston
2 as it approaches TDC. The temporarily disconnected precombustion chamber is connec-
ted to the main combustion chamber by short bypass valves drilled through the projec-
tion on the piston. The composition of the working mixture is unevenly distributed
through the combustion chamber by introducing the working charge in layers. Pure air
is drawn into the cylinder during intake through air line with butterfly valve 3 and
the cylinder intake valve. A rich fuel mixture is introduced at the same time through
the same valve from carburetor 4 along channel 5 which is located close to the open
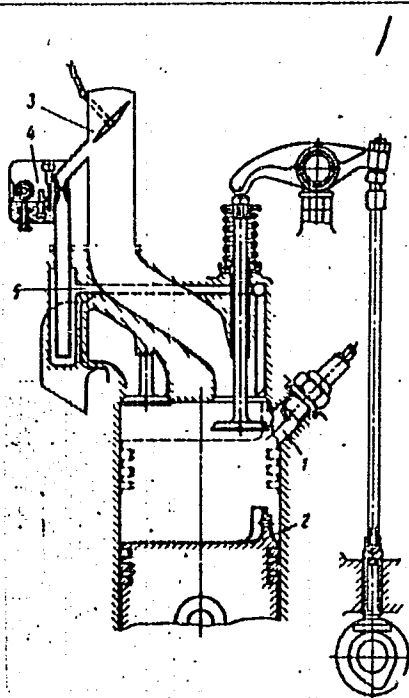precombustion chamber. The air is mixed with the fuel and vaporized to form the ex-

Card 1/3   UDC: 621.431.73.001.5

L 00896-67

ACC NR: AP6014350

plosive mixture. Engine power is regulated depend-
ing on the load by varying the quantity of air and
fuel introduced into the cylinder. This is done by
regulation of the butterfly valve which controls
both the air line and the carburetor. The combus-
tion process and operating cycle of the engine were
studied in detail at the Institute of Chemical Phy-
sics AN SSSR on a single-cylinder CFR engine at
various crankshaft speeds and degrees of compression
and with various cubic contents for the precombus-
tion chamber, cross sections for the bypass valves
and forms of the main combustion chamber. The re-
sults show that spark ignition is normal as well as
flame front formation and propagation. The combus-
tion process in the main combustion chamber is ef-
fective and stable. The engine operates without
knocking when the butterfly valve is wide open under
conditions of maximum torque on B-70 gasoline in
mixtures close to the theoretical composition at op-
timum ignition advance angles approximately 10 units
below those for spark ignition. The engine has 15%
more power than carburetor precombustion engines

Card 2/3

L 00896-67

ACC NR: AP6014350   0

with permanently disconnected precombustion chamber. Orig art. has: 5 figures.

SUB CODE: 21, 13/ SUBM DATE: none

awm
Card   3/3

L 65048-65:   EWT(m)/EPF(c)/T/EWA(c)   WE'

ACCESSION NR: AP5021897

UR/0281/65/000/004/0098/0110
621.43.04.056:536.461

AUTHOR: Gussak, L. A. (Moscow)

TITLE: New ignition and combustion principle for [automotive] engines

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 4, 1965, 98-110

TOPIC TAGS: piston engine, gasoline engine, internal combustion engine, engine combustion system, engine fuel system, engine performance characteristic, turbulent combustion, fuel carburetor, combustion initiation, internal combustion engine component

ABSTRACT: The article reviews the shortcomings of internal-combustion engines, as related to combustion-process characteristics. Precombustion-chamber flame ignition with turbulent combustion is described as a new principle, and data are presented showing the improvement in engineering, economic, and operating indices as a result of its application. Extensive research and development by the Institute of Chemical Physics of the Academy of Sciences USSR and the Gor'kiy Automobile Plant has led to the production and testing of GAZ-51F(GAZ-52), GAZ-21F, and ZIL-120FK engines in trucks and passenger cars. The author concludes that the use of the new principle

Card 1/2

L 65048-65

ACCESSION NR: AP5021897

results in a lower octane number (by 10) being required, a decrease of more than 10% in average fuel consumption, and the almost total elimination of toxic exhaust gases in automotive engines. A cross-sectional view of a design for an engine of this type is included in the article. Orig. art. has: 10 figures and 2 formulas.

[LB]

ASSOCIATION: none
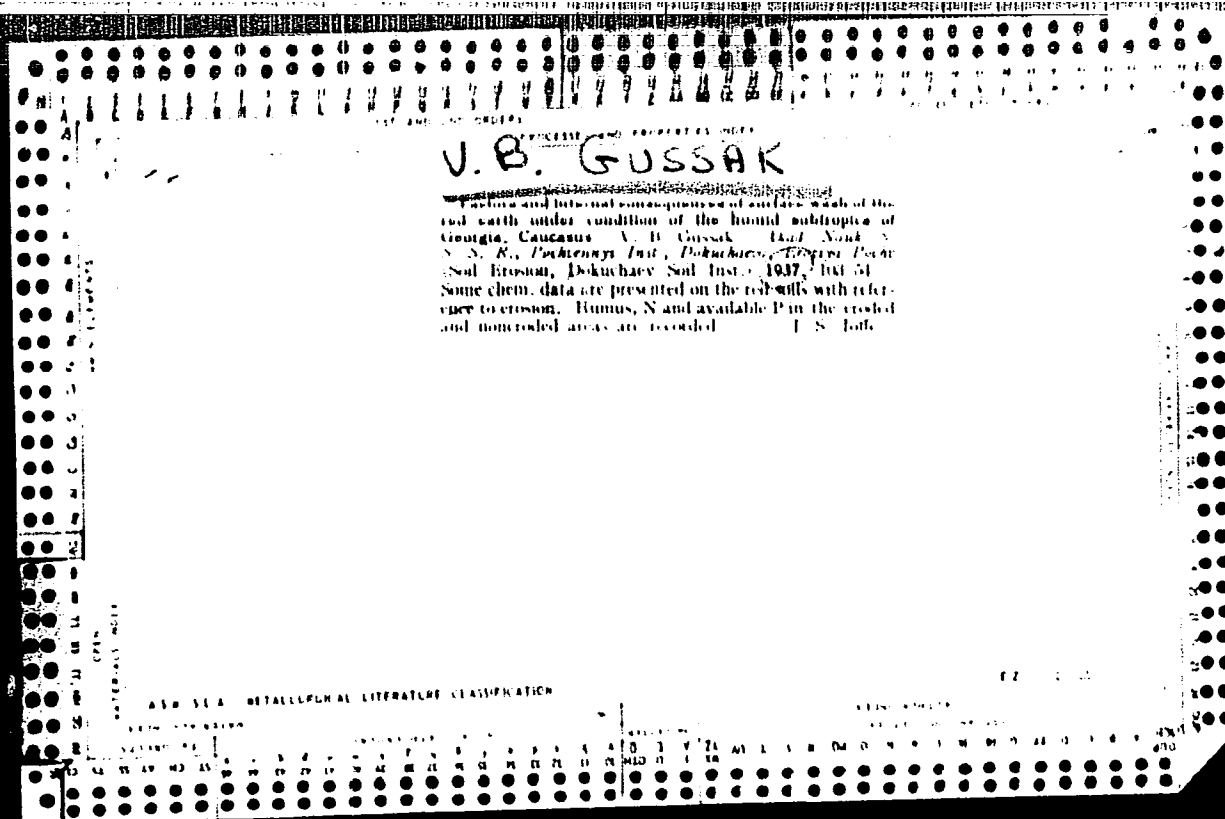
SUBMITTED: 17Mar65   ENCL: 00   SUB CODE: FR

NO REF SOV: 007   OTHER: 001   ATD PRESS: 4/08P

Card 2/2

V. B. GUSSAK

Surface and internal consequences of surface wash of the red earth under conditions of the humid subtropics of Georgia, Caucasus. V. B. Gussak. Ind. Nauk S. S. R., Pochvennyi Inst., Dokuchaev Expert Petr. Soil Erosion, Dokuchaev Soil Inst. 1937. 51. Some chem. data are presented on the red soils with reference to erosion. Humus, N and available P in the eroded and noneroded areas are recorded.   I. S. Joffe.

GUSSAK, V. B.

USSR

V.V. Dokuchayeva Soil Inst., Moscow (-1946-)

"A device for a rapid determination of the erodibility of soils andsome results of its application"

Pochvovedeniy, No. 8, 1946.

PA 36/40T108

GUSSAK, V. B.

Jul 48

USSR/Soil Science
    Erosion

"Some Observations on Soil Erosion in the Border
Layer With the Aid of Micro-Cino-Surveying,"
V. B. Gussak, 5 pp

"Pochvovedeniye" No 7

Sand and dust particles play important role in
soil erosion. Determines that under conditions
of turbulent movement of the boundary layer there
is none of the laminar movement described by
Landau. States that winds with speeds of 19 cm
per sec displace sand particles of 1-Lm diameter
or less at the rate of 3 - 15 mm per sec.
                                            36/49T108

GUSSAK, V. B.

23975   GUSSAK, V. B. Opyt issledovaniya protsessa erozii pochu na modelyakh.
         Problemy sov. Pochvovedeniya, SB. 15, 1949, 3. 211-19 -- Bibliogr: S.
         218-19.

         SO: Letopis, No. 32, 1949.

GUSSAK, V.B.

Scientific translations published by "Inostrannaia literatura" and
about scientific translations in general. Pochvovedenie no.12:83-89
D '56.   (MLRA 10:2)
        (Translations)   (Soils)

USSR/Soils Science. Physical and Chemical Properties of   J
    Soils

Abs Jour : Ref Zhur-Biol., No 13, 1958, 58267, By P.Sh.

Author . : Gussak V. B.
Inst   : Not given
Title   : On the Formation of an Artificial Soil Structure

Orig Pub : Sats. s. kh. Uzbekistana, 1957, No6, 71-73

Abstract : The experimental and productive application of
            artificial structure-forming substances to the
            soils in the Central Asiatic cotton belt in ad-
            dition to the cotton-alfalfa crop rotation has
            been suggested. Experiments should be conducted,
            first of all, on gray desert soils which are mo-
            re abundant in the areas which are marked for
            irrigation. Several substances now successfully
            being used in the USA are named.

Card 1/1

GUSSAK, V.B., Doc Agr Sci -- (diss) "Soil erosion, means of

investigation, and certain problems connected with it." Tashkent,

1959. 41 pp (Uzbek Acad of Agr Sci, Tashkent Agr Inst). 250 co-

pies. List of author's work at end of text (KL,39-59,105)

63

GUSSAK, V.B.; KIMBERG, N.V.; UMAROV, M.U.; MAKHSUDOV, Kh.M.

Some data on the extent of erosion in Uzbekistan, its aftereffects
and control measures. Uzb.biol.zhur. no.1:73-81 '59.
                                          (MIRA 12:7)

1. Institut pochvovedeniye AN UzSSR.
          (Uzbekistan--Erosion)

GUSSAK, Veniamin Borisovich; NASYROV, Yakh'ya Mirsaidovich;
SKVORTSOV, Yuriy Aleksandrovich; BOYKO, A.N., red.; SOROKINA,
Z.I., tekhn. rea.

[Soil formation on loess accumulations of various ages and
the fertility of Sierozems] Pochvoobrazovanie na lessovykh
akkumuliatsiiakh raznogo vozrasta i plodorodie serozemov.
Tashkent, In-t pochvovedeniia, 1961. 159 p.   (MIRA 15:7)
                    (Uzbekistan—Sierozem soils)
                      (Uzbekistan—Loess)